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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/613,386  | 07/03/2003  | Takaya Sato          | 001-03-044          | 7223             |
| 35870   | 7590        | 06/29/2004           | EXAMINER            |                  |
| APEX JURIS, PLLC<br>13194 EDGEWATER LANE NORTHEAST<br>SEATTLE, WA 98125 |             |                      | NGUYEN, PHONG H     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3724                |                  |

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/613,386

Applicant(s)

SATO ET AL.

Examiner

Phong H Nguyen

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanda et al. (5,772,495).

Regarding claim 1, Sanda teaches the invention substantially as claimed including the steps of:

Slitting the sheet material by a blade. See col. 1, lines 1-14.

Reshaping and smoothing convex portions on the slit sheet material at station 75. See Figs. 6, 7, 9 and col. 8, lines 15-35.

Removing fragments adhered on the slit sheet material at station 48. See Figs. 4, 6 and col. 8, line 58-col. 9, line 31.

Sanda fails to teach an electrode raw material sheet of an electrical component. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the device of Sanda for purpose of slitting an electrode raw material sheet since the material in Sanda and in the Applicant's invention are both in sheet form.

Regarding claim 2, Sanda teaches removing fragments by airflow. See Figs. 4, 6 and col. 9, lines 6-31.

Regarding claims 3 and 4, the brush system is best seen in Fig. 4.

3. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanda et al. (5,772,495) in view of Fischer et al. (4,010,514).

Regarding claims 5-7, the modified method of Sanda teaches the invention substantially as claimed except for the step of cleaning the surface of the slit sheet by a sheet roll. Fischer teaches cleaning a web surface by using two sheet rolls. Each sheet roll comprises a plurality of vents and is made of a non-woven fabric. See Figs. 1, 2, 3a, 3b and col. 1, lines 52-60. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use sheet rolls as taught by Fischer to clean a web surface as an alternative means for cleaning.

Regarding claim 8, the modified method of Sanda teaches the invention substantially as claimed except for the use of a sheet roll to clean the surface of a web in addition to a brush. Fischer teaches cleaning a web surface by using two sheet rolls. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sheet rolls as taught by Fischer in addition to the brushes as taught by Sanda in order to reduce the flying fragments in the brush cleaning station 48 since the sheet rolls suck some fragments into the rolls.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanda et al. (5,772,495) in view of Ruesch (3,768,293).

The modified method of Sanda teaches the invention substantially as claimed except for the step of using a pair of rolls for reshaping and smoothing a convex portion of the slit sheet. Ruesch teaches using a pair of rolls 30 for reshaping and smoothing a convex portion of a sheet after being slit. See Figs. 4-6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a pair of rolls as taught Ruesch on the device of Sanda as an alternative means for reshaping and smoothing a convex portion of a sheet after being slit.

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimizu et al. (4,709,157), Pryce et al. (3,871,253), Lough et al. (3,986,301) and Filleau et al. (3,897,705) teach slitting devices of general interest.

Wieloch et al. (5,699,584) and Elsbery et al. (3,945,077) teach cleaning mechanisms of general interest.

Laine (3,192,834) teaches a deburring device of general interest.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phong H Nguyen whose telephone number is 703-305-4989. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 703-308-1082. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3724

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PN: *pn*

June 18, 2004



**STEPHEN CHOI**  
**PRIMARY EXAMINER**